

## HOW TO DETERMINE A STORY, A BASEMENT AND A CELLAR:

In certain zones, there is a limit on the number of stories allowed in the Zoning Ordinance. In the R-60 and R-90 residential zones, the maximum number of stories permitted is 2 ½ stories. Some of the commercial, industrial and mixed use zones also have limits on the number of stories allowed. The method listed below shows how to determine if a floor of the building is a basement or a cellar. A

**basement** is considered a story and defined as, that portion of a building below the first floor joists where at least half of its clear ceiling height is **above** the average elevation of the finished grades along the perimeter of the building. A **cellar** is not counted as a story and defined as, that portion of a building below the first floor joists where at least half of its clear ceiling height is **below** the average elevation of the finished grades along the perimeter of the building.

## METHODOLOGY for BASEMENT/CELLAR DETERMINATION in the R-60 & R-90 ZONES:

This calculation must be done using average **finished grades** and **pre-development grade elevations**.

1. Determine the grades along perimeter of house. This is done by multiplying each wall section length times the grade adjacent to that section. The grade used for this determination is whichever is lower, either finished grade or pre-development grade at any point along the perimeter walls. Add all the products together and divide by the total perimeter to obtain the average elevation of finished and pre-development grade.
2. Determine the elevation of the lowest level (basement or cellar slab elevation) from site plan or floor plan. (Multiple floor slab levels in basements or cellars must be averaged. Contact a zoning specialist for the method used to determine this average.)
3. Subtract #2 from #1 to get the average height of finished grade above basement floor.
4. Determine the distance from basement floor slab to the bottom or underside of first floor joists. This is the height of the foundation wall plus the sill plate. (Multiple ceiling heights in basements or cellars must be averaged. Contact a zoning specialist for the method used to determine this average.)
5. Divide the result of #4 by 2 to get the midpoint.
6. If #3 is greater than #5, it is a cellar and therefore not a story. If #3 is less than #5, it is a basement and is considered a story.

Calculations:

1. Length of walls times elevations = Totals

Then divide by the total perimeter to obtain the average elevation of finished or pre-development grade:

2. Basement or Cellar elevation:

3. (1) - (2) =

4. Height of foundation wall from basement/cellar to bottom of 1<sup>st</sup> floor joists:

5. (4) / 2 =

6. (3) (< or >) (5)

Basement or Cellar

## EXAMPLE of METHODOLOGY for BASEMENT/CELLAR DETERMINATION in R-60 & R-90 ZONES:

SEE SAMPLE SITE PLAN ON NEXT PAGE

FINISHED & PRE-DEV. GRADES--Perimeter of House (in feet)		1st Elev.	2nd Elev.	Elevation	Total
1.	Front wall of house at garage: 19	356.50	356.75	356.63	6775.88
	Front wall of house at porch: 2	356.75	356.75	356.75	713.50
	Front wall of house at porch: 8	356.75	357.00	356.88	2855.00
	Front wall of house: 14	357.00	357.00	357.00	4998.00
	East side wall: 48	357.00	356.00	356.50	17112.00
	Rear of house: 21	356.00	355.00	355.50	7465.50
	Rear of house: 10	355.00	355.00	355.00	3550.00
	Rear of house: 16	355.00	355.50	355.25	5684.00
	West side wall, including garage: 35	355.50	356.50	356.00	12460.00
	173		divided		61613.88 =356.15
	Avg. Elevation of Finished & Pre-dev. Grades Around House	356.15			
2.	Basement/Cellar Elevation	349.80			
3.	Avg. Ht. of Finished & Pre-dev. Grades Above Bsmt/Cellar	6.35			
4.	Distance from flr. to btm. of 1st flr. joists-Ht. of wall & sillplate	8.16			
5.	Midpoint of Foundation Wall	4.08			
6.	Basement or Cellar:				
	Lowest level is a cellar	TRUE			
	Lowest level is a basement	FALSE			